



### **Detailed Description of the Preferred Embodiment**

Figure 1 shows an exemplary vehicle 10. The vehicle 10 includes a frame 12, front wheels 22A and 22B, rear wheels 48A and 48B, and front and rear suspension 20 and 46. No fenders are illustrated thereon. Figure 1 thus shows a neutral reference configuration, for comparison with Figures 2-5.

However, Figure 1 is not only a neutral reference.

In conventional vehicles that have fenders thereon, those fenders cannot readily be removed. In contrast, as described below, the present invention facilitates the addition, removal, replacement, and movement of fenders on a vehicle. Thus, it may be difficult or impossible to configure a conventional vehicle so that it is as shown in Figure 1. For example, the fenders of such a conventional vehicle may not be removable. However, a vehicle with fenders in accordance with the principles of the present invention may be readily configured as shown in Figure 1. Thus, Figure 1 represents one of several configurations possible for an exemplary vehicle with fenders in accordance with the principles of the present invention, in particular a configuration that may not be readily achievable on a conventional vehicle. As such, Figure 1 is not presented as prior art.

Figure 2 shows the vehicle of Figure 1 with front fender bodies 14A and 14B and rear fender bodies 40A and 40B. As illustrated, all of the fender bodies 14A, 14B, 40A, and 40B are relatively close to their respective wheels 22A, 22B, 48A, and 48B. This arrangement is referred to herein as the low position.

Figure 3 shows the vehicle of Figure 1 with the fender bodies 14A, 14B, 40A, and 40B relatively distant from their respective wheels 22A, 22B, 48A, and 48B. This arrangement is referred to herein as the high position.

Thus, as shown in Figures 2 and 3, the fender bodies 14A, 14B, 40A, and 40B may be connected to the vehicle 10 such that they are disposed in different positions. Although the fender bodies 14A, 14B, 40A, and 40B are shown in two specific positions, high and low, this is exemplary only. More generally, the fender bodies 14A, 14B, 40A, and 40B may be

described as being movable between first and second positions, without specifying the particular positions.

For example, although the high and low positions shown differ from one another in terms of the height of the fender bodies 14A, 14B, 40A, and 40B above their respective wheels 22A, 22B, 48A, and 48B, this is exemplary only. For example, for certain embodiments it may be suitable to facilitate positioning of the 14A, 14B, 40A, and 40B at different lateral positions, at different positions along the length of the vehicle, at different angles, etc.

Furthermore, although for simplicity the fender bodies 14A, 14B, 40A, and 40B are described and illustrated herein as being movable between exactly two positions, this is exemplary only. In other embodiments, the fender bodies 14A, 14B, 40A, and 40B may be adjustable between three or more positions.

As illustrated in Figures 2 and 3, when the front fender bodies 14A and 14B are in their low position, the front fender bodies 14A and 14B are engaged with the front suspension 20 of the vehicle 10. Similarly, when the rear fender bodies 40A and 40B are in their low position, the rear fender bodies 40A and 40B are engaged with the rear suspension 46 of the vehicle 10.

It is noted that when fender bodies 14A, 14B, 40A, 40B are to be engaged with the suspensions 20, 46 of a vehicle 10, they should be engaged in such a fashion as not to interfere with the operation of the suspensions 20, 46. That is, the fender bodies 14A, 14B, 40A, 40B should not inhibit the necessary movement, support functions, shock absorption, etc. of the suspensions 20, 46 due to their engagement therewith.

The precise manner in which the fender bodies 14A, 14B, 40A, 40B may advantageously be engaged without interfering with the suspensions 20, 46 of a given embodiment of a vehicle 10 will vary from depending upon the specific arrangement of the vehicle 10 in general, and the fender bodies 14A, 14B, 40A, 40B and suspensions 20, 46 in particular. For example, for certain embodiments, the fender bodies 14A, 14B, 40A, 40B

may be clamped or similarly mounted to the respective suspension arms of the suspensions 20, 46. However, such an arrangement is exemplary only, and other arrangements may be equally suitable.

In addition, when the front fender bodies 14A and 14B are in their high position, the front fender bodies 14A and 14B are engaged with the vehicle frame 12. Similarly, when the rear fender bodies 40A and 40B are in their high position, the rear fender bodies 40A and 40B are engaged with the vehicle frame 12.

However, such arrangements are exemplary only. For certain embodiments, it may be equally suitable to dispose the fender bodies 14A, 14B, 40A, and 40B at other locations instead of or in addition to those shown.

In addition, the fender bodies 14A, 14B, 40A, and 40B may be engaged with the vehicle at more than one location. For example, even when the fender bodies 14A, 14B, 40A, and 40B are engaged with the vehicle frame 12 when they are in their respective high positions as described above, they may also be engaged with the vehicle body 11. It is noted that the arrangements shown in Figures 3-5 do not exclude such engagement with the vehicle body 11, though details of such engagement may not be readily visible therein. However, engagement of the fender bodies 14A, 14B, 40A, and 40B with the vehicle body 11 is described and illustrated elsewhere herein.

Furthermore, as described below, in certain embodiments it may be possible to move the fender bodies 14A, 14B, 40A, and 40B from one position to another without changing the location on the vehicle 10 at which they engage the vehicle 10, e.g. by using brackets of different shapes and/or sizes.

Figure 4 shows the vehicle of Figure 1 with front fender bodies 14A and 14B in their high position, and rear fender bodies 40A and 40B in their low position. Contrariwise, Figure 5 shows the vehicle of Figure 1 with front fender bodies 14A and 14B in their low position, and rear fender bodies 40A and 40B in their high position. As may be seen, it is not

necessary for all of the fender bodies 14A, 14B, 40A, and 40B to be disposed in the same position.

As may be seen from Figures 2-5, the fender bodies 14A, 14B, 40A, and 40B, being separate from the vehicle body as a whole, conveniently may be constructed as individual pieces.

In addition, since the fender bodies 14A, 14B, 40A, and 40B are not required to be integral with the vehicle body as a whole, the fender bodies 14A, 14B, 40A, and 40B may be made of different material than the vehicle body. Indeed, the fender bodies 14A, 14B, 40A, and 40B may be made of different materials from one another, as well. Likewise, the fender bodies 14A, 14B, 40A, and 40B may have different colors, textures, rigidity, thickness, etc. among themselves and as compared with the vehicle body.

As described above, Figures 1-5 are perspective views of an exemplary vehicle 10 with fender bodies 14A, 14B, 40A, and 40B arranged in different positions (high and low). Figures 6-10 show a similar vehicle 10 and its associated fender bodies 14A and 14B in a simplified schematic form. This is done to show clearly an exemplary arrangement by which the fender bodies 14A and 14B may be made to be movable between two or more positions.

One way in which the fender bodies 14A, 14B, 40A, and 40B maybe moved from one position to another on the vehicle 10 is by moving the point at which they engage the vehicle 10 from one location to another, as may be seen by a comparison of Figures 6 and 7.

It is noted that the terms "location" and "position" are not used interchangeably herein.

As used herein, "location" refers to a point or points on the vehicle 10 at which the fender bodies 14A, 14B, 40A, and 40B may be engaged, either directly or indirectly (e.g. via a bracket, as described below). In the exemplary embodiment described herein, there are first locations 16A and 16B and second locations 24A and 24B for the front fender bodies 14A and 14B.

In contrast, the term "position" is used herein to describe a point or points at which the fender bodies 14A, 14B, 40A, and 40B may be disposed. For example, as illustrated in Figures 1-5 each of the fender bodies 14A, 14B, 40A, and 40B may be arranged in either a high position or a low position.

Thus, position refers to where the fender bodies 14A, 14B, 40A, and 40B are, and location refers to where on the vehicle 10 the fender bodies 14A, 14B, 40A, and 40B are attached.

However, although for some embodiments a change in the position of the fender bodies 14A, 14B, 40A, and 40B may be accomplished by changing the location at which the fender bodies 14A, 14B, 40A, and 40B engage the vehicle 10, this is exemplary only. Other arrangements, including but not limited to those described below, may be equally suitable.

Returning to Figure 6, a cross-section of a vehicle 10 is shown therein. The cross section is taken across the front portion of the vehicle 10, so as to show front fenders 30A and 30B. Each front fender 30A, 30B includes a front fender body 14A, 14B, and at least one mounting assembly as described in greater detail below.

Although only the front fenders 30A, 30B, including the front fender bodies 14A, 14B and their mounting assemblies, are shown in Figures 6-10, the rear fenders and their respective fender bodies 40A and 40B may be arranged in a similar fashion, and the following discussion as to the arrangement of the front fender bodies 14A and 14B therefore may be applied similarly to the rear fender bodies 40A and 40B.

As may be seen in Figure 6, the vehicle 10 includes low mounting locations 16A and 16B at which the fender bodies 14A and 14B may engage the vehicle 10. The vehicle 10 also includes high mounting locations 24A and 24B at which the fender bodies 14A and 14B may engage the vehicle 10.

In Figure 6, the fender bodies 14A and 14B are engaged with the vehicle 10 at the low mounting locations 16A and 16B. As may be seen, the front fender bodies 14A and 14B

are disposed relatively close to their respective wheels 22A and 22B. Thus, their positions correspond to the low position shown in Figures 2 and 5.

In the exemplary arrangement shown in Figure 6, a low mounting assembly 31A, 31B is disposed between each of the fender bodies 14A, 14B and its respective first location 16A, 16B. The low mounting assemblies 31A, 31B engage the fender bodies 14A, 14B and the low mounting locations 16A, 16B, such that the fender bodies 14A, 14B engage the low mounting locations 16A, 16B thereby, and the fender bodies 14A and 14B are in their low positions.

Figure 7 shows the vehicle of Figure 6, with the fender bodies 14A and 14B engaged with the vehicle 10 at the high mounting locations 24A and 24B. In this configuration, the fender bodies 14A and 14B are disposed relatively far above their respective wheels 22A and 22B, so that their positions correspond to the high position shown in Figures 3 and 4.

In the arrangement shown in Figure 7, a high mounting assembly 50A, 50B is disposed between each of the fender bodies 14A, 14B and its respective high mounting location 24A, 24B. The arrangement of the high mounting assemblies 50A and 50B is similar to that of low mounting assemblies 31A and 31B. That is, the high mounting assemblies 50A, 50B engage the fender bodies 14A, 14B and the high mounting locations 24A, 24B, such that the fender bodies 14A, 14B engage the high mounting locations 24A, 24B thereby, and the fender bodies 14A, 14B are disposed in their high positions.

Thus in the arrangement shown in Figures 6 and 7, the fender bodies 14A and 14B use one type of mounting assembly 31A, 31B for the low position, and another type of mounting assembly 50A, 50B for the high position.

Figures 12 and 13 show greater detail regarding the engagement of the fender bodies 14A (not shown), 14B as illustrated in Figures 6 and 7.

As may be seen from Figure 12, in the exemplary embodiment shown the low mounting assembly 31B includes a low bracket 32B disposed between the fender body 14B

and the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 via the low bracket 32B.

Similarly, as may be seen from Figure 13, the high mounting assembly 50B includes a high bracket 52B disposed between the fender body 14B and the high mounting location 24B. Thus, in the high position the fender body 14B is engaged with the vehicle 10 via the high bracket 52B.

Returning to Figure 12, the exemplary low mounting assembly 31B therein also includes low connectors 34B, both for connecting the fender body 14B with the low bracket 32B and for connecting the low bracket 32B to the vehicle 10 at the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 using the low connectors 34B.

Similarly, the high mounting assembly 50B shown in Figure 13 also includes high connectors 54B, both for connecting the fender body 14B with the high bracket 52B and for connecting the high bracket 52B to the vehicle 10 at the high mounting location 24B. Thus, in the high position the fender body 14B is engaged with the vehicle 10 using the high connectors 54B.

In the arrangement shown in Figures 6 and 7, one or both of the fender bodies 14A, 14B can be moved from the low position to the high position as follows. The fender bodies 14A, 14B are disengaged from the low mounting locations 16A, 16B by removing the low mounting assemblies 31A, 31B from both the fender bodies 14A, 14B and the low mounting locations 16A, 16B. The fender bodies 14A, 14B are then engaged with the high mounting locations 24A, 24B using the high mounting assemblies 50A, 50B.

More specifically, as may be understood by a comparison of Figures 12 and 13, fender body 14B can be moved from its low position to its high position by disengaging the low connectors 34B, disengaging the low bracket 32B from the low position 16B, engaging the high bracket 54B in the high position 24B, and engaging the high connectors 54B.

Similarly, the fender body 14B can be moved from the high position to the low position by reversing the process described above.

In addition, a fender body 14B in the low position can be replaced by disengaging the low connectors 34B, disengaging the low bracket 32B from the fender body 14B, engaging a new fender body 14B with the low bracket 32B, and engaging the low connectors 34B. A similar process may be used to replace a fender body 14B in the high position.

It will also be apparent from the preceding description that a fender body 14B may be installed by following a process similar to that described above, without the need for first removing a fender body and/or mounting assembly.

As shown in Figures 12 and 13, the connectors 34B, 54B are bolts and/or nuts disposed in holes in the fender body 14B and/or brackets 32B, 52B. However, this is exemplary only. Other connectors may be equally suitable, including but not limited to clamps, spring clips, locking pins, etc. In particular, connectors that do not require holes in the fender body 14B and/or brackets 32B, 52B may be suitable for some embodiments.

The connectors 34B, 54B may be quick release connectors. For example, the connectors 34B, 54B may be sacrificial break-away connectors, such that some portion of the connectors 34B, 54B bends or breaks more readily than the fender body 14A, 14B and/or the remainder of the mounting assembly 31B, 50B. With such an arrangement, potentially damaging impacts to the fenders or their respective mounting assemblies, i.e. due to contact with trees, brush, etc., may be avoided, since the connectors will break first. Thereby, repairs to or replacement of the mounting assemblies and/or the fenders as a whole may be avoided.

Also as shown in Figures 12 and 13, the vehicle 10 may include structures on the vehicle 10 itself for facilitating the engagement of the fender body 14B therewith, referred to herein as supports 18B, 26B. In Figure 12, a low support 18B is provided in the form of a hole drilled into the suspension 20 at the low mounting location 16B for receiving a low connector 34B therein. Similarly, a high support 26B is provided in the form of a hole drilled



into the frame 12 at the high mounting location 24B for receiving a high connector 54B therein.

However, the supports 18B, 26B as shown are exemplary only. Other supports may be equally suitable, including but not limited to pins extending from the vehicle, reinforced areas on the vehicle, etc. In particular, supports that do not require holes in the vehicle 10 may be suitable for some embodiments. Furthermore, supports 18B, 26B may not be present at all in some embodiments.

In addition, the overall arrangement shown in Figures 6 and 7, and shown in greater detail in Figures 12 and 13, is exemplary only.

In Figures 6, 7, 12, and 13, the fender body 14B is disposed in either the low or the high position by using two different mounting assemblies 31B and 50B. Each of the mounting assemblies 31B, 50B has a unique bracket 32B, 52B and a unique set of connectors 34B, 54B. Each mounting assembly 31B, 50B is completely removed from the fender body 14B when the fender body 14B is arranged at a position other than the one for which the respective mounting assembly 31B, 50B is used. Furthermore, each of the mounting assemblies 31B, 50B engages the fender body 14B with the vehicle 10 at a different location 16B, 24B.

However, other arrangements may be equally suitable. For example, a common mounting assembly 70B may be used to engage the fender bodies 14A (not shown), 14B at both their low and high positions.

Alternatively, the mounting assemblies 31B, 50B may include one or more components that are common to both, and that are used engage the fender bodies 14A, 14B at both their low and high positions.

Additionally, the fender bodies 14A, 14B may include two complete mounting assemblies 31B, 50B, one for their respective high positions and one for their low positions, that both remain in place regardless of which position the fender bodies 14A, 14B are in,

even if only one at a time is used to engage the fender bodies 14A, 14B with the vehicle 10 at any given time.

These arrangements are described more fully below.

As noted previously, in another embodiment in accordance with the principles of the present invention, each fender 30A, 30B may include a common mounting assembly 70A, 70B for engaging the fender bodies 14A, 14B with the vehicle 10 in both the low and the high positions.

Figure 8 shows a cross-section of a vehicle 10, taken across the front portion of the vehicle 10 so as to show the front fenders 30A and 30B. Each of the front fender 30A, 30B includes a front fender body 14A, 14B. As may be seen, the vehicle 10 includes low mounting locations 16A and 16B and high mounting locations 24A and 24B at which the fender bodies 14A and 14B may be engaged with the vehicle 10. In the embodiment shown, the low mounting locations 16A and 16B are similar to those in Figures 6 and 7. However, the high mounting locations 24A and 24B are arranged differently, being defined at the ends of L-shaped arms on either side of the frame 12.

For comparison purposes, the vehicle 10 of Figure 8 is shown with fender bodies 14A, 14B located in both the low and the high positions. However, in practice the vehicle 10 will not necessarily have fender bodies 14A, 14B at both the low and the high positions at any given time.

As may be seen, identical common mounting assemblies 70A, 70B are used to engage the fender bodies 14A, 14B with the vehicle 10 in both the low and the high positions. With the common mounting assemblies 70A, 70B disposed between the fender bodies 14A, 14B and their respective low mounting locations 16A, 16B, the fender bodies 14A, 14B are in their low positions. With the same common mounting assemblies 70A, 70B disposed between the fender bodies 14A, 14B and their high mounting locations 24A, 24B, the fender bodies 14A, 14B are in their high positions.

Figures 14 and 15 show greater detail regarding the engagement of the fender bodies 14A, 14B as illustrated in Figure 8.

Figure 14 shows greater detail regarding the engagement of the fender bodies 14A (not shown), 14B with the vehicle 10 in their low positions as illustrated in Figure 8. As shown, the common mounting assembly 70B includes a common bracket 72B disposed between the fender body 14B and the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 via the common bracket 72B.

Similarly, Figure 15 shows details of the engagement of the fender bodies 14A (not shown), 14B with the vehicle 10 in their low positions as illustrated in Figure 8.

The same common mounting assembly 70B again includes a common bracket 72B disposed between the fender body 14B and the high mounting location 24B. Thus, in the high position the fender body 14B also is engaged with the vehicle 10 via the same common bracket 72B as in the low position.

Returning to Figure 14, the exemplary common mounting assembly 70B therein also includes common connectors 74B, both for connecting the fender body 14B with the common bracket 72B and for connecting the common bracket 72B to the vehicle 10 at the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 using the common connectors 74B.

Similarly, the same common mounting assembly 70B shown in Figure 15 also includes the same common connectors 74B, both for connecting the fender body 14B with the common bracket 72B and for connecting the common bracket 72B to the vehicle 10 at the high mounting location 24B. Thus, in the high position the fender body 14B is engaged with the vehicle 10 using the same common connectors 74B as in the low position.

In the arrangement shown in Figure 8, one or both of the fender bodies 14A, 14B can be moved from the low position to the high position as follows. The fender bodies 14A, 14B are disengaged from the low mounting locations 16A, 16B by removing the common mounting assemblies 70A, 70B from both the fender bodies 14A, 14B and the low mounting

locations 16A, 16B. The fender bodies 14A, 14B are then engaged with the high mounting locations 24A, 24B using the same common mounting assemblies 70A, 70B.

More specifically, as may be understood by a comparison of Figures 14 and 15, fender body 14B can be moved from its low position to its high position by disengaging the common connectors 74B, moving the common bracket 72B from the low position 16B to the high position 24B, and engaging the common connectors 74B.

Likewise, a fender body 14B similarly may be replaced or installed, as desired.

As noted previously, in another embodiment in accordance with the principles of the present invention, each fender 14A, 14B may use a low mounting assembly 31A, 31B for engaging the fender bodies 14A, 14B with the vehicle 10 in the low position, and a different high mounting assembly 50A, 50B for engaging the fender bodies 14A, 14B with the vehicle 10 in the high position. However, it is not necessary for the low and high mounting assemblies 31A, 31B and 50A, 50B to be completely unique. That is, some elements may be common to both the low mounting assemblies 31A, 31B and the high mounting assemblies 50A, 50B.

Figure 9 shows a cross-section of a vehicle 10, taken across the front portion of the vehicle 10 so as to show the front fenders 30A and 30B and their fender bodies 14A and 14B. As may be seen, the vehicle 10 includes low mounting locations 16A and 16B and high mounting locations 24A and 24B at which the fender bodies 14A and 14B may engage the vehicle 10. For comparison purposes, the vehicle 10 of Figure 9 is shown with fender bodies 14A, 14B located in both the low and the high positions.

As in Figures 6 and 7, in Figure 9 a low mounting assembly 31A, 31B is used to engage each of the fender bodies 14A, 14B with the vehicle 10 in the low position. Likewise, a high mounting assembly 50A, 50B is used to engage each of the fender bodies 14A, 14B with the vehicle 10 in the high position.

However, in Figures 16 and 17, it may be seen that although the low mounting assembly 31B is not entirely different from the high mounting assembly 50B.

Figure 16 shows greater detail regarding the engagement of the fender bodies 14A, 14B with the vehicle 10 in their low positions as illustrated in Figure 9. As shown, the low mounting assembly 31B includes a common bracket 72B disposed between the fender body 14B and the low mounting location 16B.

As seen in Figure 17, which shows greater detail regarding the engagement of the fender bodies 14A (not shown), 14B with the vehicle 10 in their high positions as illustrated in Figure 9, the high mounting assembly 50B includes the same common bracket 72B that is used in the low mounting assembly 31B. As in the low mounting assembly 31B, in the high mounting assembly 50B the common bracket 72B is disposed between the fender body 14B and the high mounting location 24B.

Thus, in both the low position and the high position the fender body 14B is engaged with the vehicle 10 via the common bracket 72B, even though the low mounting assembly 31B as a whole is not identical to the high mounting assembly 50B.

For example, returning to Figure 16, the exemplary low mounting assembly 31B therein also includes low connectors 34B for connecting the fender body 14B with the common bracket 72B and for connecting the common bracket 72B to the vehicle 10 at the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 using the low connectors 34B.

Similarly, the high mounting assembly 50B shown in Figure 17 includes the high connectors 54B for connecting the fender body 14B with the common bracket 72B and for connecting the common bracket 72B to the vehicle 10 at the high mounting location 24B. Thus, in the high position the fender body 14B is engaged with the vehicle 10 using the high connectors 54B.

As may be seen, even when a common bracket 72B is used, other elements of the mounting assemblies may be different, such as the low connectors 34B and high connectors 54B.

In the arrangement shown in Figure 9, one or both of the fender bodies 14A, 14B can be moved from the low position to the high position as follows. The fender bodies 14A, 14B are disengaged from the low mounting locations 16A, 16B by removing the common mounting assemblies 70A, 70B from both the fender bodies 14A, 14B and the low mounting locations 16A, 16B. The fender bodies 14A, 14B are then engaged with the high mounting locations 24A, 24B using the same common mounting assemblies 70A, 70B.

More specifically, as may be understood by a comparison of Figures 16 and 17, fender body 14B can be moved from its low position to its high position by disengaging the low connectors 34B, moving the common bracket 72B from the low position 16B to the high position 24B, and engaging the high connectors 54B.

Likewise, a fender body 14B similarly may be replaced or installed, as desired.

In addition, it is noted that elements other than a bracket may be common to the low and high mounting assemblies 31A, 31B and 50A, 50B. For example, another embodiment in accordance with the principles of the present invention is shown in Figure 10, wherein low mounting assemblies 31A, 31B are used for engaging the fender bodies 14A, 14B with the vehicle 10 in the low position, and different high mounting assemblies 50A, 50B are used for engaging the fender bodies 14A, 14B with the vehicle 10 in the high position.

As with the embodiment shown in Figure 9, the low and high mounting assemblies 31A, 31B and 50A, 50B in Figure 10 are not completely unique. However, as may be seen from Figures 18 and 19, the low and high mounting assemblies 31B and 50B do not share a common bracket.

Figure 18 shows greater detail regarding the engagement of the fender bodies 14A, 14B with the vehicle 10 in their low positions as illustrated in Figure 10. As shown, the low mounting assembly 31B includes a low bracket 32B disposed between the fender body 14B and the low mounting location 16B.

As seen in Figure 19, which shows greater detail regarding the engagement of the fender bodies 14A (not shown), 14B with the vehicle 10 in their high positions as illustrated

in Figure 10, the high mounting assembly 50B includes a high bracket 52B that is different from the low bracket 32B used in the low mounting assembly 31B. As shown, in the high mounting assembly 50B the high bracket 52B is disposed between the fender body 14B and the high mounting location 24B.

However, returning to Figure 18, the exemplary low mounting assembly 31B therein also includes common connectors 74B for connecting the fender body 14B with the low bracket 32B and for connecting the low bracket 32B to the vehicle 10 at the low mounting location 16B. Thus, in the low position the fender body 14B is engaged with the vehicle 10 using common connectors 74B.

Similarly, the high mounting assembly 50B shown in Figure 19 includes the common connectors 74B for connecting the fender body 14B with the high bracket 52B and for connecting the high bracket 52B to the vehicle 10 at the high mounting location 24B. Thus, in the high position the fender body 14B is engaged with the vehicle 10 using the same common connectors 74B used in the low mounting assembly 31B.

As may be seen, even when a different brackets are used, other elements of the mounting assemblies may be common, such as the common connectors 74B.

In the arrangement shown in Figure 10, one or both of the fender bodies 14A, 14B can be moved from the low position to the high position as follows. The fender bodies 14A, 14B are disengaged from the low mounting locations 16A, 16B by removing the common mounting assemblies 70A, 70B from both the fender bodies 14A, 14B and the low mounting locations 16A, 16B. The fender bodies 14A, 14B are then engaged with the high mounting locations 24A, 24B using the same common mounting assemblies 70A, 70B.

More specifically, as may be understood by a comparison of Figures 18 and 19, fender body 14B can be moved from its low position to its high position by disengaging the common connectors 74B, disengaging the low bracket 32B from the low position 16B, engaging the high bracket 52B with the high position 24B, and engaging the common connectors 74B.

Likewise, a fender body 14B similarly may be replaced or installed, as desired.

In addition, as noted previously, in another embodiment in accordance with the principles of the present invention, each fender 30A, 30B simultaneously may include a low mounting assembly 31A, 31B for engaging the fender bodies 14A, 14B with the vehicle 10 in the low position, and a different high mounting assembly 50A, 50B for engaging the fender bodies 14A, 14B with the vehicle 10 in the high position. Thus, each of the fender bodies 14A, 14B may be engaged simultaneously with two complete mounting assemblies 31A, 31B and 50A, 50B.

Figure 11 shows a cross-section of a vehicle 10, taken across the front portion of the vehicle 10 so as to show the front fenders 30A and 30B and their fender bodies 14A and 14B. As may be seen, the vehicle 10 includes low mounting locations 16A and 16B and high mounting locations 24A and 24B at which the fender bodies 14A and 14B may engage the vehicle 10. For comparison purposes, the vehicle 10 of Figure 11 is shown with fender bodies 14A, 14B located in both the low and the high positions.

Each fender body 14A, 14B is engaged with a low mounting assembly 31A, 31B used to engage the fender bodies 14A, 14B with the vehicle 10 in the low position. Likewise, each fender body 14A, 14B is engaged with a high mounting assembly 50A, 50B used to engage the fender bodies 14A, 14B with the vehicle 10 in the high position.

This is similar to the arrangement shown in Figures 6 and 7, except that whereas in that embodiment the low and high mounting assemblies 31A, 31B and 50A, 50B are used singularly, with the unneeded mounting assembly being removed. By contrast, in the embodiment of Figure 11, both the low and high mounting assemblies 31A, 31B and 50A, 50B are present regardless of whether the fender bodies 14A (not shown), 14B are in the low or high position.

Figures 20 and 21 show greater detail regarding the engagement of the fender bodies 14A, 14B with the vehicle 10 in their low and high positions as illustrated in Figure 11.



As shown, the fender body 14B has the low mounting assembly 31B and the high mounting assembly 50B engaged therewith. The low mounting assembly 31B includes a low bracket 32B, which in the low position is disposed between the fender body 14B and the low mounting location 16B. The high mounting assembly 50B likewise includes a high bracket 52B, which in the high position is disposed between the fender body 14B and the high mounting location 24B (not shown).

In addition, the low mounting assembly 31B includes low connectors 34B for connecting the fender body 14B with the low bracket 32B and for connecting the low bracket 32B to the vehicle 10 at the low mounting location 16B, when the fender body 14B is in the low position. Similarly, the high mounting assembly 50B includes high connectors 54B for connecting the fender body 14B with the high bracket 52B and for connecting the high bracket 52B to the vehicle 10 at the high mounting location 24B (not shown), when the fender body 14B is in the high mounting location.

In the arrangement shown in Figure 11, one or both of the fender bodies 14A, 14B can be moved from the low position to the high position as follows. The fender bodies 14A, 14B are disengaged from the low mounting locations 16A, 16B by removing the low mounting assemblies 31A, 31B from the low mounting locations 16A, 16B. The fender bodies 14A, 14B are then engaged with the high mounting locations 24A, 24B using the high mounting assemblies 50A, 50B.

More specifically, as may be understood by a comparison of Figures 20 and 21, fender body 14B can be moved from its low position to its high position by disengaging at least some of the low connectors 34B, disengaging the low bracket 32B from the low position 16B, engaging the high bracket 52B in the high position 24B, and engaging the high connectors 54B.

Likewise, a fender body 14B similarly may be replaced or installed, as desired.

It is emphasized that the mounting assemblies described above are exemplary only. Other arrangements may be equally suitable. For example, for some embodiments it may be

advantageous to dispense with the brackets altogether, engaging the fender bodies 14A, 14B directly with the vehicle. Similarly, some embodiments may not include separate connectors such as the nuts and bolts illustrated, instead using shape-locking elements or other arrangements to engage the fender bodies 14A, 14B.

In addition, although in the arrangements illustrated and described previously the fender bodies 14A, 14B are moved from the low to the high position by moving their point of engagement with the vehicle 10 from a low mounting location 16A, 16B to a high mounting location 24A, 24B, this is exemplary only. As may be seen from a comparison of Figures 22 and 23, the fender bodies 14A, 14B may be disposed in either of the low and high positions while being engaged at a common mounting location 25A, 25B for both positions. Figure 22 shows low mounting assemblies 31A, 31B engaging the fender bodies 14A, 14B with the vehicle at the common mounting location 25A, 25B to dispose the fender bodies 14A, 14B in their low position. Similarly, Figure 23 shows high mounting assemblies 50A, 50B engaging the fender bodies 14A, 14B with the vehicle at the common mounting location 25A, 25B to dispose the fender bodies 14A, 14B in their high position.

Thus, as may be understood, the use of low and high mounting locations 16A, 16B and 24A, 24B is exemplary only.

Furthermore, although as illustrated and described herein the low and high mounting locations 16A, 16B and 24A, 24B are disposed on the suspension 20 and frame 12 respectively of the vehicle 10, this is exemplary only. In embodiments having low and high mounting locations 16A, 16B and 24A, 24B, the low and high mounting locations 16A, 16B and 24A, 24B may be disposed elsewhere on the vehicle 10. Likewise, for embodiments having common mounting locations 25A, 25B, the common mounting locations 25A, 25B may be disposed elsewhere on the vehicle 10 than on the suspension 20 as is illustrated in Figures 22 and 23.

As previously noted, the engagement of the fender bodies 14A, 14B, 40A, and 40B with the vehicle 10 at one respective location does not exclude further engagement of the fender bodies 14A, 14B, 40A, and 40B at additional locations.

For example, as shown in Figure 24, fender bodies 14A and 14B are in the high position, engaged with the vehicle 10 at the high mounting locations 24A and 24B on the vehicle frame 12 via the high mounting assemblies 50A and 50B respectively. However, in addition, the fender bodies 14A and 14B are engaged with the vehicle 10 at locations 61A and 61B on the vehicle body 11 via the mounting assemblies 60A and 60B respectively.

For purposes of discussion herein, locations 61A and 61B are hereinafter referred to as body mounting locations 61A and 61B, and mounting assemblies 60A and 60B are referred to as body mounting assemblies 60A and 60B. However, it is emphasized that this is exemplary only; additional mounting locations are not limited only to mounting locations on the vehicle body 11, likewise additional mounting assemblies are not limited only to those suitable for mounting to the vehicle body 11.

As shown in Figure 24, the body mounting assemblies 60A and 60B are separate components, distinct from the high mounting assemblies 50A and 50B. However, this is exemplary only.

Figure 25 shows an alternative arrangement, wherein the high mounting assemblies 50A and 50B facilitate mounting both at the high mounting locations 24A, 24B and the body mounting locations 61A, 61B. Effectively, the high mounting assemblies 50A and 50B in Figure 25 incorporate body mounting assemblies 60A and 60B (not separately identified in Figure 25) therein.

Figures 28 and 29 show enlarged views of the fenders in Figures 24 and 25, respectively. The arrangements shown therein are to some degree similar to those in Figure 13, though this is exemplary only. However, similar components already described with regard to Figure 13 will not be described again in detail with regard to Figures 28 and 29.

As shown in Figure 28, the high mounting assembly 50B includes a high bracket 52B disposed between the fender body 14B and the high mounting location 24B, so that the fender body 14B is engaged with the vehicle 10 via the high bracket 52B. The high mounting assembly 50B shown also includes high connectors 54B for connecting the fender body 14B with the high bracket 52B and for connecting the high bracket 52B to the vehicle 10 at the high mounting location 24B, so that the fender body 14B is engaged with the vehicle 10 using the high connectors 54B.

In addition, the body mounting assembly 60B in Figure 28 includes a body bracket 62B disposed between the fender body 14B and the body mounting location 61B. Thus, the fender body 14B is engaged with the vehicle 10 via the body bracket 62B, as well as via the high bracket 52B. The body mounting assembly 60B shown also includes body connectors 64B for connecting the body bracket 62B to the vehicle 10 at the body mounting location 61B, so that the fender body 14B is engaged with the vehicle 10 using the body connectors 64B.

As shown in Figure 28, one of the high connectors 54B connects the fender body 14B with both the high bracket 52B and the body bracket 62B. However, although such "sharing" of connectors is not prohibited, neither is it required. The high connectors 54B may be dedicated exclusively to connection via the high bracket 52B, and the body connectors 64B may likewise be dedicated exclusively to connection via the body bracket 62B.

In addition, as with connectors 34B, 54B, connectors 64B may be quick release connectors. Connectors 64B may be sacrificial break-away connectors, such that some portion of the connectors 64B bends or breaks more readily than the fender body 14A, 14B and/or the remainder of the body mounting assembly 60A (not shown), 60B.

Also as shown in Figure 28, the vehicle 10 may include structures thereon for facilitating the engagement of the fender body 14B therewith via the body mounting assembly 60B. As illustrated, a body support 66B is provided in the form of a hole drilled into the body 11 at the body mounting location 61B for receiving a body connector 64B

therein. However, such an arrangement is exemplary only. Other supports may be equally suitable, including but not limited to pins extending from the vehicle, reinforced areas on the vehicle, etc. In particular, supports that do not require holes in the vehicle 10 may be suitable for some embodiments. Furthermore, body supports 66B may not be present at all in some embodiments.

Figure 29 also shows an arrangement wherein the high mounting assembly 50B includes a high bracket 52B disposed between the fender body 14B and the high mounting location 24B, so that the fender body 14B is engaged with the vehicle 10 via the high bracket 52B. However, as shown the high mounting assembly 50B also is disposed between the fender body 14B and the body mounting location 61B. Effectively, the high mounting assembly 50B shown in Figure 29 incorporates into a single structure the high mounting assembly 50B and body mounting assembly 60B shown in Figure 28.

As noted previously, for some embodiments both the low mounting assemblies 31A, 31B and the high mounting assemblies 50A, 50B may remain engaged with the fender body 14B, even when they are not being used to engage the fender body 14 with the vehicle 10. As shown in Figures 26 and 27, this is equally true with regard to the body mounting assemblies 60A, 60B.

Figures 26 and 27 show fender bodies 14A, 14B in the low position. Even though the high mounting assemblies 50A, 50B and the body mounting assemblies 60A, 60B are not used to engage the fender bodies 14A, 14B with the vehicle in that position, they may remain present as shown. Figure 26 shows high mounting assemblies 50A, 50B and body mounting assemblies 60A, 60B that are separate, as in Figure 24, and Figure 27 shows high mounting assemblies 50A, 50B that also serve as body mounting assemblies (not separately numbered therein). as in Figure 25.

With regard to their use, and depending on the particular embodiment, the body mounting assemblies 60A, 60B may also have to be installed, removed, and/or replaced as the low mounting assemblies 31A, 31B and the high mounting assemblies 50A, 50B.

Installation, removal, and replacement of fender bodies 14A, 14B when body mounting assemblies 60A, 60B are present is similar to those processes described above for arrangements where body mounting assemblies 60A, 60B are not present, with the addition of similar manipulations of brackets, connectors, etc. associated with the body mounting assemblies 60A, 60B.

The above specification, examples and data provide a complete description of the manufacture and use of the composition of the invention. Since many embodiments of the invention can be made without departing from the spirit and scope of the invention, the invention resides in the claims hereinafter appended.